

An Essay
on
Pneumonia

Respectfully submitted to the
Faculty of the Homoeopathic
Medical College of Pennsylvania.

By

James E Black
of Canada West.

February 1st 1858 —

The health of the body depends upon its organs performing properly their several functions. Also the functional irregularity of one organ will disorder the entire system, But this general sympathy is more apparent and dangerous as the organ first attacked is important. Thus when the lungs heart or any other of the viscera are diseased the whole system is sometimes so disordered that death soon results. Hence the term vital has been applied to these organs. I have chosen as the subject of this thesis Pneumonia or inflammation of the lungs, - organ whose health is most essential to the welfare of the whole system. Now before the physician can properly diagnose the disease affecting any organ he must become acquainted with its pathology which would imply a knowledge of its anatomy and physiology - This remark is especially true in diagnosing the pathological states of the lungs which when known will reveal the progress made by the disease and its probable termination. Pathologists

have received great encouragement to continue their important investigations by their discoveries in this region of their science, From this field Laennec Andral and other eminent pathologists have reaped their richest harvest of truths, which are none such an invaluable aid in the proper treatment of this disease. I will now state the anatomy of the lungs. They are two in number, occupying the cavity of the chest, each of the shape of an irregular cone - They rest on the diaphragm, are protected anteriorly, posteriorly and laterally by the walls of the chest. The bronchia, nerves and blood vessels, enter the lungs at the upper portion of their posterior margins - Each lung is divided into lobes, the right having three, the left only two. The left lung is excavated for the reception of the heart, which is situated between the two lungs. Their colour varies with age. In infancy it is of a pinkish hue, in the adult greyish with black spots and in old age is much darker. They are lighter than water, hence sections of the lungs will float.

They are made up of blood vessels, lymphatics, nerves, air cells, and bronchial tubes all connected together with areolar tissue. As has been stated the blood vessels, bronchia and nerves enter the lungs at the upper portion of their posterior margins. The two main divisions of the trachea entering the lungs at this place divide and subdivide until their ramifications buried in their substance become so diminutive as not to be seen without the aid of an microscope. They are lined through their whole extent with a mucous membrane beautifully supplied with mucous follicles. According to the calculation of Kochoux there are three hundred million air cells in each lung. They are arranged in lobules. Each lobule has its own bronchial tube into which some of its cells immediately open and ^{the rest} communicate with it through the former. The cells are lined with a fibrous membrane; hence in pneumonia the inflammation of this membrane is accompanied by a deposition of fibrine. The lobules do not communicate with one another.

The arteries are called pulmonary and bronchial, the former conveys the blood to the lungs to become renovated - Their capillaries completely surround and line the air cells. The blood is thus brought into near proximity ~~with~~ the air, being separated from it by only a thin membrane - The nerves of the lungs come from the pneumogastric nerve and cervical ganglions. The lungs are surrounded by and ^{connected} to the pleura by means of cellular tissue. The pleura is a serous membrane and being often inflamed in this disease, pleurisy aggravates the pains of the patient by a number of new symptoms.

^{Although} The Physiology of the Lungs
And though the mode by which the blood is purified in the lungs is still discussed by physiologists, they all agree that it is here purified and made fit for the system, and that the cells and bronchia must be free from all foreign matter that the air may have free passage.

through their whole extent before this purgation
will be accomplished

The pathology of Pneumonia

Its pathology is very interesting as it reveals the remarkable changes which result from the inflammation of the lung tissue. The lungs are liable to a series of changes from inflammation and each of them should obtain from the physician serious attention. They are divided into four stages. The first is engorgement - ~~the second red~~ hepatization, ~~the~~ third grey hepatization and the fourth the stage of gangrene. In engorgement the lung is gorged with blood. Hence the natural colour of the lung gives place to a dark red. The air cells and tubes being partially filled with an effusion of mucus and fibrine contain less air. Hence the diseased lung does not crepitate as much under the pressure of the finger as the healthy lung. It is less elastic, retaining the impression of the finger. Its consistence is that of the spleen, and when cut a bloody serum exudes and lastly the air

its specific gravity though less than water is increased. In red Hepatization there is no crepitation as the air is completely excluded from the cells by the effusion - A piece of the lung will sink in water. Its substance when cut is of an uniform red colour except where it is mottled by specks of the black matter of the lung and interlobular areolar tissue. The cells are obliterated and the lung becomes quite solid though of less consistence being more easily crushed or broken - It is enlarged in its bulk. The lung is said to be hepatized, because of the resemblance of its interior when cut, with that of the liver.

In the stage of grey hepatization the red or mottled appearance of the lung changes to a reddish yellow colour. This is owing to the progress made by the process of disorganization. Now if the moribund lung is compressed, a puriform matter exudes.

Nearly all firmness of texture has disappeared and the lung can be reduced to a yellowish grey pulp by crushing it with the fingers. This is the last stage of ordinary pneumonia, *Largane* sometimes attacks the lung but it is a very rare result of pneumonia and generally constitutes an independent and primitive affection. Its presence is announced to the physician by the horrible odour of the patient's breath and expectoration. I have just stated the great changes undergone by the lungs in pneumonia. Now they are not necessarily fatal. The stage of suppuration is not always followed by hepatization. It often yields to the reaction of a vigorous constitution and Homoeopathic treatment generally succeeds in subduing this stage when resorted to early. And Hepatization is not always fatal. It is true that it incapacitates the lung, but in the first place seldom are both lungs attacked with pneumonia at the same time, hence

though one is hepatized the respiratory function
may be performed by the other - In the
second place as the lung is divided first into
lobes and then into lobules, hepatization
may be confined to one of the former or latter
and thus but a small portion of one lung
be useless - And lastly the hepatized part
may be thrown off by expectoration and its place
be supplied by new tissue and thus the
lung is entirely repaired. But when both
lungs are at the same time diseased the
result is generally unfavourable. or if the
patient recovers from the pneumonia he
will soon fall victim to phthisis pulmonalis
Pneumonia attacks the right lung twice
as often as it does the left and the lower
lobes are more obnoxious to the disease
than the upper ones. In pneumonia the
mucous membrane of the bronchiae is always
inflamed and the pleura is often attacked

1 off

hence this disease is always complicated with
Bronchitis and often with Pleurisy. Having
stated the pathology of this disease I will
proceed to explain the signs of auscultation
and percussion. A change occurring to the
lungs is followed by an alteration of their
normal sounds and these afford to a
certain extent a true diagnosis of the
progress of the disease. The effusion of
matter into the air cells during engorgement
is indicated by a peculiar crackling sound
which Dr Williams says is similar to that
made by rubbing a lock of hair between
the fingers. The natural respiratory murmur
is a gentle rustling sound. Hence when
one becomes acquainted with the last sound
he will upon mechanical principles refer
the former to the passage of air through the
effused liquid. But this is one of the signs
of Bronchitis yet the other symptoms of

Pneumonia will serve to decide that suppuration and not Bronchitis is present. Hepatization destroys this sound of crepitation and in its stead there is bronchial respiration.

The passage of air into the lung is confined to the bronchia - It is a puffing sound or like that produced by blowing through a quill. The voice can be heard with great clearness on account of the solidification of the lung. This clear and loud voice is called "broncophony". The healthy lung being of a spongy texture is a poor conductor of sound and therefore the voice in its passage loses its distinctness, becoming a humming or muttering - Percussion of the chest over the hepatized portion is dull and flat. Such are the physical signs of Pneumonia, Yet they may be absent and still there be the disease for the diseased portion may be so entirely covered by healthy lung as to be beyond the reach

of auscultation or percussion. Hence the art
of percussion and auscultation should ~~ob-~~
-tain from the young practitioner much study
and he must practice them on many patients
before he will become excellent in their
use.

The causes of Pneumonia
They are various. Vicissitudes of weather,
It is especially apt to occur at the breaking
up of Winter and early in Spring. Sudden
exposure to cold. It is very prevalent in the
cold latitudes. The inhalation of acid and
poisonous substances. Immoderate exercise
of the lungs in singing and playing wind
instruments. The suppression of habitual
discharges, retrocession of cutaneous eruptions
and metastasis of Gout and Rheumatism. It often
complicates Smallpox, Typhoid fever, Measles
Whooping Cough, and Scarlet fever. It also
rankles among the sequelae of some of these diseases.

Allopathic treatment especially the administration of large doses of Tartar Emetic and lastly accidental wounds or those the result of surgical operations.

The disease at first is announced by febrile symptoms such as chilliness followed by heat and acceleration of the pulse, also by a dull deep seated pain in the chest. There is ^{difficulty} of breathing or dyspnoea. The patient complains of a weight on his chest - The dyspnoea increases as the inflammation progresses and hepatisation takes place. At last the patient seems wholly occupied with respiring. The intense suffocation he experiences makes him restless and struggle for more air. The blood not being properly aerated imparts a livid or very pale hue to his countenance. There is a frequent, continuous and short cough, at the onset dry but followed by the expectoration of a rusty

viscid sputa, At first the expectoration consists of a glairy mucus, but as inflammation goes on this changes to a rusty coloured sputa and this as the patient recovers returns to the first. Children and old persons do not give the rusty sputa, they expectorate much less than do the middle aged, The rusty sputa sometimes is so viscid as to adhere to the basin when inverted When this is the case, hepatization has occurred. When the expectoration becomes of a greenish reddish or dirty grey colour and has a foetid smell, gangrene has occurred, The patient generally lies on his back, though sometimes on the diseased side, His skin is hot and moist, there is thirst and a rapid full pulse, The headache is sometimes very violent and in the course of the disease delirium may occur, The urine in the first and second

stages sometimes shows a reddish grey sediment
In the third stage the urine becomes thick and
turbid with grey flakes suspended in it
and pus can be detected in its sediment
If allowed to stand for a few hours
it becomes very offensive in its smell. The
believer in Homoeopathy is justified in
contemplating the treatment of this disease
with great satisfaction, For the statistics of
of Homoeopathic treatment of pneumonia
prove its entire superiority to that of
the old school, The Allopathic Physician
considers it as one of the most formidable
and fatal of diseases, and in the treat-
ment of none does the foolishness of basing
treatment upon mere theory more appear
For their blind worship of theory has persuaded them
to resort to treatment blood thirsty and savage
When a number of Allopathic phys-
cians surround a patient

patient suffering an attack of pneumonia, we have an opportunity of witnessing the first and last resorts of believers in the theories of learned men. The depletion of blood, until the reaction of the system against the disease has been quite subdued, the administration of large doses of Tartar Emetic, draining the organs of their secretion by the administration of mercury, quieting the cough by stupifying the nervous centres with opium, and lastly the application of numerous leeches and blisters, we have prescribed, after a very solemn consultation and no doubt true diagnosis - We exclaim - "What a miracle if the poor fellow survives the concentrated attack of so many violent measures upon the vital forces. But now and then they do survive in spite of the tendency of the

treatment and to them do the Allopathic school refer in triumph though statistics plainly prove that more patients recover when left to nature than when thus treated. And by the same statistics it is proven that Homoeopathy cures more than unassisted nature. The remedies which Homoeopathic practitioners principally use are Aconite, Belladonna, Phosphorus, Tartar Emetic, Rhus, Bryonia, Sulphur, Arsenicum, Carbo Vegetabilis and China. Aconite is important whenever a fever is present, Bell is often administered in alternation with Ac when indicated by the brain symptoms, as violent headache flushed face and delirium. For the Pleurisy which often complicates pneumonia Aconite and Bryonia in alternation. Other symptoms may indicate another remedy instead of Aconite - Bry is

indicated by cutting pains and stitches
in the side especially on inspiration
therefore difficult and anxious respiration,
and troublesome cough. When hepatization
is revealed by the peculiar sputa, percussion,
and auscultation, the physician should
think of Tartar Emetic and Phos-Tartar.
Emetic is indicated by cold and clam-
my skin, expectoration of a yellowish or
brownish colour and mixed with blood,
small soft and frequent pulse, is
especially useful when bilious symptoms
are present, a yellowish, brownish fur on
the tongue, bitter taste, nausea and bilious
vomiting, yellow or dark urine and
headache.

Phosphorus is indicated by the brown, rusty
coloured sputa which is with pain coughed
up, great oppression of breathing, sticking
and violent stitches in various parts of the

chest, in the sides especially when sitting
and taking in an inspiration,

Rhus is indicated by excessive red-
ness of the face, great debility and pro-
stration, extreme restlessness and rheu-
-matic pains in ^{the} chest and sides, when
pneumonia is of a typhoid cast, Bry is
often alternated with Rhus with an
improvement of the symptoms

Sulphur is often of great ^{use} in enabling
the other remedies to act, by removing or
diminishing the psora or scrofulous
taint inherent to the system.

Arsenicum is indicated by clammy skin
great frequency of a weak pulse, the
patient is greatly prostrated, his resp-
-iration is short and feeble, by dark tongue,
extreme anguish; exhausting diarrhoea,
expectoration of foetid disorganized matter.
Carbo Vey and china rank in the same

class with Aescenicum though the
last is far the most reliable remedy.
When the patient is very much enfeebled
by the exhausting influence of the disease
and does not rally under the treatment,
he should be supported by port wine,
beef tea and the like, thus life may
be prolonged and the remedies having
in the meanwhile answered the end for
which they were administered the health
of the patient be restored.

The dietetic regimen

While the fever continues high, and
in the commencement of the disease, the
diet should consist of farinaceous and
mucilaginous drinks - While the treatment
is with Aconite, all acid drinks should
be prohibited, as they interfere with the
action of this remedy. Otherwise they are
allowable, such as the juice of Oranges or

of fresh grapes - The decoction or infusion of dried fruit will prove very grateful to the patient and at the same time be harmless. As the patient convalesces a more nourishing diet should be prescribed, He should be allowed weak black tea, toasted bread and crackers, boiled rice or indian mush after thin milk and finally the lighter meats, eggs, oysters etc.

The end